

### **REMARKS**

Applicants submit this Amendment in response to the final Office Action mailed July 2, 2009 and Notice of Panel Decision from Pre-Appeal Brief Review mailed April 20, 2010. In the final Office Action, the Examiner rejected claims 23, 25-28, 30-33, 35-38, 40-42, and 44 under 35 U.S.C. § 102(b) as anticipated by WO 02/104055 ("*Barbaresi*").<sup>1</sup> The Notice of Panel Decision maintained the same rejection.

By this Reply, Applicants have amended independent claims 23, 33, and 44 in an effort to expedite prosecution. Support for these amendments may be found, for example, at page 10, lines 26-35 of the Specification. No new matter has been added. Accordingly, claims 23, 25-28, 30-33, 35-38, 40-42, and 44 are currently pending, of which claims 23, 33, and 44 are independent.

Applicants respectfully traverse the pending rejections and request reconsideration of the present application in view of the foregoing claim amendments and the following remarks.

#### **A. Rejections Under 35 U.S.C. § 102**

Applicants respectfully traverse the rejection of independent claims 23, 33, and 44 under 35 U.S.C. § 102. In order to properly establish an anticipation rejection under 35 U.S.C. § 102, every element of the claims at issue must be found in the applied prior-art reference, either expressly or under principles of inherency. Furthermore, "[t]he identical invention must be shown in as complete detail as is

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<sup>1</sup> Since *Barbaresi* was published on December 27, 2002, less than one year before the international filing date of the present application, it does not qualify as prior art under Section 102(b). Therefore, Applicants presume that the Examiner's anticipation rejections were made under Section 102(a).

contained in the ... claim.” See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). In this case, *Barbaresi* fails to teach or suggest every element of Applicants’ claims, as amended.

The pending claims are directed to simulating a communication network on a digital computer by means of an object-based architecture. Each object represents a device of the network. The simulated network is capable of operating in accordance with a plurality of different telecommunication systems. To that end, mobile terminal devices in the simulated network are modeled using a grouping of modules comprising application modules, access modules, and core network modules. These modules represent protocol layers present in the mobile terminal devices being simulated. For example, representative independent claim 23 recites, in relevant part the following:

modeling, on the digital computer, the mobile terminal devices as a grouping of modules simulating behavior of different protocol layers present in the mobile terminal devices, wherein the modules comprise:

application modules having a same implementation for the plurality of different telecommunication systems,

access modules being specific for the one of the plurality of different telecommunication systems, and

core network modules being used by the plurality of different telecommunication systems but with partly different operation for each of the plurality.

Applicants submit that *Barbaresi* fails to disclose or suggest at least “modules simulating behavior of different **protocol layers** present in the mobile terminal devices,” including “**core network modules** being used by the plurality of different telecommunication systems but **with partly different operation for each of the**

***plurality [of different telecommunication systems]***,” as recited in each of the independent claims.

*Barbaresi*, which is discussed in the Background of Applicants' Specification, discloses a system and method for simulating the behavior of a communication network. Simulated mobile terminal devices are implemented using several modules, including modules that implement various protocol layers in order to emulate the behavior specific to phones used with the relevant system (e.g., GSM or GPRS). See *Barbaresi* at 7:11-19 and 26-36; 8:26-30. As described in more detail below, the modules in *Barbaresi* that implement protocol layers are disclosed as being specific to a particular protocol, e.g., GSM or GPRS.

Applicant's Specification identifies *Barbaresi*'s design approach of implementing protocol layers using modules that are specific to a singular protocol as having significant drawbacks in design efficiency and processing complexity. For example, the background of the Specification notes the following:

Applicant has observed that using the architecture disclosed by WO-A-02/104055 [(*Barbaresi*)] it is very complicated to extend the simulation capability to new systems, in particular new cellular systems to be simulated: this operation requires on each occasion the design and implementation of the modules/devices pertaining to the new systems to be inserted. Moreover, when simulating different systems (such as GSM GPRS and UMTS cellular systems) with the prior art simulation architecture, such a high level of processing complexity can be reached as to make simulations hardly feasible . . . .

The Specification further explains that disclosed embodiments are designed “to conduct joint simulations of multiple telecommunication systems or networks, operating according to different standards . . . the architecture being at least in part reusable when inserting new systems.” Specification at 2-3. In other words, the simulation architecture

as disclosed in the Specification includes features that can be reused among multiple telecommunication systems, as new systems are inserted into the simulated architecture. This concept of reusability is evident, for example, in the claimed “modules simulating behavior of different protocol layers present in the mobile terminal devices,” including “core network modules being used by the plurality of different telecommunication systems but with partly different operation for each of the plurality” of different telecommunication systems.

*Barbaresi* fails to disclose that any modules representing protocol layers comprise “core network modules . . . with partly different operation for each of [a] plurality [of different telecommunication systems], as recited in each of Applicants’ independent claims 23, 33, and 44. As shown in Figure 3, for example, a simulated GSM mobile device, GSM\_MS (item 41a), and GPRS mobile device, GPRS\_MS (item 41b) are composed of modules, including several specifically corresponding to protocol layers of particular communication network types, GSM and GPRS, respectively.

*Barbaresi* at 7:26-35; 8:26-30; Figure 3. In the case of the GSM mobile device, for example, three protocol-layer modules are used: GSM\_MS\_VCG (item 49a), GSM\_MS\_RR (item 43a), and GSM\_MS\_PHY (item 42a). These modules implement the application-protocol, RR-protocol, and physical layers according to the specifications of the GSM standard. *Barbaresi* at 7:25-8:29. Similarly, the simulated GPRS\_MS device is composed of various modules that implement various protocol layers, as specified by the GPRS standard. See, e.g., *Barbaresi* at 8:29-10:35; Figure 3, (modules 49b, 48b, 47b, 46b, 45b, 44b, 42b, 43b).

Based on this disclosure, the protocol layer modules in *Barbaresi* are implemented to operate specifically as required for a single, particular type of communication network. That is, the GSM-specific modules in *Barbaresi* do not further provide GPRS operations or vice versa. See, generally, *Barbaresi* at 7-10. As such, the particular modules of GSM\_MS and GPRS\_MS responsible for implementing protocol layers in *Barbaresi* are specific to particular types of telecommunication systems (e.g., GSM or GPRS) and thus do not constitute “core network modules . . . **with partly different operation for each of the plurality [of different telecommunication systems],”** as recited in each of Applicants’ independent claims 23, 33, and 43.

In summary, the Office has failed to point to any feature in *Barbaresi* corresponding to “modeling, on the digital computer, the mobile terminal devices as a grouping of modules simulating behavior of different protocol layers present in the mobile terminal devices, wherein the modules comprise . . . core network modules being used by the plurality of different telecommunication systems but with partly different operation for each of the plurality,” as recited by independent claims 23, 33, and 44. Dependent claims 25-28, 30-32, 35-38, and 40-42 depend from independent claims 23, 33, and 44, and are allowable over the art of record for at least the same reasons.

**B. Rejection Under 35 U.S.C. § 112, ¶ 2**

Applicants also respectfully traverse the Office’s rejection of claim 27 under § 112, ¶ 2 because the claim term “Node B” is allegedly “vague and indefinite.” Final Office Action at 3. The specification discloses that the term “Node B” is an acronym that

is “well known to those versed in the art.” Specification at 5:25-28. To one of ordinary skill in the art, “Node B” refers to a base station that communicates with a user equipment in a UMTS access network. See *e.g.*, Specification at 7:31-35 (“devices of the access network (BTS and BSC for GSM/GPRS; NodeB and RNC for UMTS)”; see *also* UMTS Standard, 3GPP TS 25.101 version 5.12.0, at 10 (defining “Node B: A logical node responsible for radio transmission/reception in one or more cells to/from the User Equipment.”). Thus, the claim term “Node B” is amenable to only one plausible construction and therefore is not “vague and indefinite” as alleged in the Office Action.

In light of the foregoing Remarks, Applicants respectfully request that the Examiner reconsider the rejections over prior art in light of the amended claims and pass pending claims 23, 25-28, 30-33, 35-38, 40-42, and 44 to issue.

### **CONCLUSION**

The preceding remarks are based only on the assertions in the Office Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the Office Action. The claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding remarks in favor of patentability are advanced without prejudice to other possible bases of patentability.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of the application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: July 28, 2010

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